

WHAT IS CLAIMED IS:

1. A reflecting-mirror-equipped lamp comprising:

a double end type high pressure discharge lamp including a luminous bulb enclosing a luminous material therein and first and second sealing portions respectively
5 extending from both ends of the luminous bulb; and

a reflecting mirror for reflecting light emitted from the high pressure discharge lamp,

wherein the reflecting mirror includes a wide opening provided on a side of the reflecting mirror from which light is emitted and a narrow opening for fixing the high
10 pressure discharge lamp,

the first sealing portion of the high pressure discharge lamp is fixed near the narrow opening of the reflecting mirror, and no base is attached to the first sealing portion,

the second sealing portion of the high pressure discharge lamp is disposed toward the wide opening of the reflecting mirror,

15 the first sealing portion includes an external lead extending outward from the first sealing portion and exposed from the first sealing portion, and

part of the external lead extending from the first sealing portion and an outward-drawn lead wire electrically connected to an external circuit are joined to each other by the plastic flow of a caulking member.

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2. A reflecting-mirror-equipped lamp comprising:

a high pressure discharge lamp including a luminous bulb which encloses a luminous material therein and in which a pair of opposed electrodes is placed, and first and second sealing portions respectively extending from both ends of the luminous bulb; and

25 a reflecting mirror for reflecting light emitted from the high pressure discharge

lamp,

wherein the reflecting mirror includes a wide opening provided on a side of the reflecting mirror from which light is emitted and a narrow opening for fixing the high pressure discharge lamp,

5 the first sealing portion of the high pressure discharge lamp is fixed near the narrow opening of the reflecting mirror, and no base is attached to the first sealing portion,

the second sealing portion of the high pressure discharge lamp is disposed toward the wide opening of the reflecting mirror,

the first sealing portion seals a metal foil electrically connected to one of the electrodes at an end, and the other end of the metal foil is connected an external lead,

10 part of the external lead is located inside the first sealing portion and the other part of the external lead extends outward from an end face of the first sealing portion,

the part of the external lead extending from the first sealing portion and an outward-drawn lead wire electrically connected to an external circuit are joined to each other by the plastic flow of a caulking member, and

15 part of the caulking member is buried in the first sealing portion.

3. The reflecting-mirror-equipped lamp of claim 1, wherein the caulking member is placed outside a space defined by a reflecting surface of the reflecting mirror.

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4. The reflecting-mirror-equipped lamp of claim 2, wherein the caulking member is placed outside a space defined by a reflecting surface of the reflecting mirror.

5. The reflecting-mirror-equipped lamp of claim 1, wherein the caulking member is surrounded and covered with cement.

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6. The reflecting-mirror-equipped lamp of claim 2, wherein the caulking member is surrounded and covered with cement.

5 7. The reflecting-mirror-equipped lamp of claim 5, wherein part of the first sealing portion is also covered with the cement.

8. The reflecting-mirror-equipped lamp of claim 6, wherein part of the first sealing portion is also covered with the cement.

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9. The reflecting-mirror-equipped lamp of claim 1, wherein the discharge lamp is a high pressure mercury lamp including mercury enclosed in an amount of 150 mg/cm^3 or more.

15 10. The reflecting-mirror-equipped lamp of claim 2, wherein the discharge lamp is a high pressure mercury lamp including mercury enclosed in an amount of 150 mg/cm^3 or more.

11. An image projecting apparatus comprising:
20 the reflecting-mirror-equipped lamp recited in claim 1;
 a lamp house for holding the reflecting-mirror-equipped lamp; and
 an optical system using the reflecting-mirror-equipped lamp as a light source.

12. An image projecting apparatus comprising:
25 the reflecting-mirror-equipped lamp recited in claim 2;

a lamp house for holding the reflecting-mirror-equipped lamp; and
an optical system using the reflecting-mirror-equipped lamp as a light source.

13. The image projecting apparatus of claim 11, wherein a high-pressure pulse for
5 starting the lamp is input to a terminal provided at the external lead extending from the first
sealing portion of the reflecting-mirror-equipped lamp.

14. The image projecting apparatus of claim 12, wherein a high-pressure pulse for
starting the lamp is input to a terminal provided at the external lead extending from the first
10 sealing portion of the reflecting-mirror-equipped lamp.